



Docket No.: K-0342

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF APPEALS AND INTERFERENCE**

In re Application of

Confirmation No.: 6523

Suk Sang OH

Group Art Unit: 2153

Serial No.: 09/987,098

Examiner: Y. Barqadle

Filed: 11/13/2001

Customer No.: 34610

For: MOBILE IP SYSTEM AND DATA ROUTING METHOD OF THE SAME

**APPEAL BRIEF**

U.S. Patent and Trademark Office  
Customer Window, Mail Stop Appeal Brief-Patents  
Randolph Building  
401 Dulany Street  
Alexandria, Virginia 223134

Sir:

This appeal is taken from the final rejection of claims as set forth in the Office Action of September 22, 2005 (hereafter the Office Action). In accordance with 37 C.F.R. §41.37, applicant addresses the following items.

**REAL PARTY IN INTEREST**

The party in interest is the assignee, LG Electronics Inc. The assignment document is recorded beginning at Reel 12305 and Frame 0728.

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### **RELATED APPEALS AND INTERFERENCES**

There are no known related appeals and/or interferences.

### **STATUS OF THE CLAIMS**

This is an appeal from the final rejection dated September 22, 2005 of claims 1-5, 7-13, 15-19, 21-25 and 27. No other claims are pending.

### **STATUS OF AMENDMENTS**

An Amendment After Final Rejection was filed on December 21, 2005. This Amendment has been entered. See the Advisory Action dated January 18, 2006. A copy of the appealed claims 1-5, 7-13, 15-19, 21-25 and 27 is provided in the attached Claims Appendix.

### **SUMMARY OF THE CLAIMED SUBJECT MATTER**

As stated in 37 C.F.R. §41.37(c) (v), applicant is providing the following explanation of each of the independent claims 1, 8, 15 and 23 involved in this appeal. This explanation refers to the specification and drawings. The following is merely an example summary and is not intended to be a discussion of the full and entire scope of the claims. Other interpretations, configurations and embodiments are also within the scope of the pending claims.

#### **Independent Claim 1**

A mobile Internet Protocol (IP) system may include a mobile node initially linked to a first foreign network. For example, FIG. 1 shows a mobile node (MN) 60. See paragraphs

[0027]-[0032] relating to location of the mobile node. The mobile IP system may also include a home agent to receive a set of data packets, which are supposed to be transmitted to the mobile node. The home agent may be included in a home network of the mobile node. For example, FIG. 1 shows a home agent (HA) 30. Paragraphs [0031] and [0032] discuss the home agent receiving data packets.

The mobile IP system may further include a first foreign agent to initially receive the packets from the home agent and store them in a buffer and additionally send the stored packets to a second foreign agent included in a second foreign network if the mobile node is moved to the second foreign network. The first foreign agent is included in the first foreign network. For example, FIG. 1 shows a foreign agent (FA1) 40 that includes a first buffer 41. Paragraphs [0032] and [0035] discuss that the foreign agent FA1 40 stores data packets in a first buffer 41. Paragraph [0033] discusses sending the data stored in the buffer 41 to a foreign agent (FA2) 50. See also FIG. 2, block S5.

Additionally, the mobile node may send a notification message to the first foreign agent if the mobile node is moved to the second foreign network. For example, paragraph [0033] discusses that the mobile node 60 sends a notification message to foreign agent FA1 40 after the mobile node 60 moves to the foreign agent FA2 50. See also FIG. 2, blocks S3 and S4.

### **Independent Claim 8**

A method is also described of transmitting data in a mobile Internet Protocol (IP) network. The method may include transmitting a set of data packets to a home agent of a mobile node, the mobile node being currently linked to a first foreign network having a first foreign

agent. For example, FIG. 1 shows a mobile node (MN) 60 and a home agent (HA) 30. See paragraphs [0027]-[0032] relating to location of the mobile node.

The method includes sending the packets received by the home agent to the first foreign agent and storing them in a first buffer. For example, FIG. 1 shows a foreign agent (FA1) 40 that includes a buffer 41. Paragraphs [0032] and [0035] discuss that the foreign agent FA1 40 stores data packets in the first buffer 41.

The method may also include sending a notification message from the mobile node to the first foreign agent if the mobile node moves to a second foreign network having a second foreign agent. For example, paragraph [0033] discusses that the mobile node 60 sends a notification message to the foreign agent FA1 40 after the mobile node 60 moves to a foreign agent (FA2) 50. See also FIG. 2, blocks S3 and S4.

The method may also include sending the packets stored in the first buffer to the second foreign agent and storing them in a second buffer if the first foreign agent receives the notification message. For example, paragraph [0033] discusses sending the data stored in the first buffer 41 to the foreign agent (FA2) 50 that includes a second buffer 51. The foreign agent FA2 50 stores the received data in the second buffer 51. See also paragraphs [0035] and [0039] and FIG. 2, block S5.

Still further, the method also includes transmitting the packets stored in the second buffer to the mobile node. For example, paragraph [0033] discusses transmitting the stored data to the mobile node 60.

**Independent Claim 15**

A data routing method is also described of a first foreign agent in a mobile Internet Protocol (IP) network. The method includes receiving a set of data packets and storing them in a buffer. The method may also include determining a mobile node to which the packets are supposed to be transmitted. For example, paragraphs [0031]-[0033] discuss a host 10 sending data packets to a home agent (HA) 30. The home agent 30 transmits the data packets to a foreign agent FA1 40 and stores the data packets in a first buffer 41.

The method also includes sending a notification message from the mobile node to a first foreign agent if the mobile node moves from a first foreign network to a second foreign network. For example, paragraph [0033] discusses that a mobile node 60 sends a notification message to the foreign agent FA1 40 after the mobile node 60 moves to a foreign agent (FA2) 50. See also FIG. 2, blocks S3 and S4.

The method includes determining if the determined mobile node is moved to the second foreign network having a second foreign agent. The method also includes transmitting the packets stored in the buffer to the second foreign agent if the mobile node is moved to the second foreign network. For example, paragraph [0033] discusses sending the data stored in a first buffer 41 to the foreign agent (FA2) 50. See also paragraphs [0035] and [0039] and FIG. 2, block S5.

**Independent Claim 23**

A mobile Internet Protocol (IP) method is also discussed that includes receiving packets at a first foreign agent associated with a first foreign network. For example, FIG. 1 shows a foreign agent (FA1) 40. Paragraph [0031] discusses the foreign agent storing the data packets.

The method may also include storing the packets in a first buffer. For example, paragraphs [0031]-[0032] and [0035] discuss storing the packets in a first buffer 41.

The method may also include sending a notification message from a mobile node to the first foreign agent when the mobile node moves from the first foreign network to a second foreign network. For example, paragraph [0033] discusses that a mobile node 60 sends a notification message to the foreign agent FA1 after the mobile node 60 moves to a foreign agent (FA2) 50. See also FIG. 2, blocks S3 and S4.

Additionally, the method includes sending the packets in the first buffer to a second foreign agent associated with the second foreign network. For example, paragraph [0033] discusses sending the data stored in a first buffer 41 to the foreign agent (FA2) 50. See also FIG. 2, block S5.

**GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

Claims 1, 3, 5-7, 8-10, 12, 14-15, 17, 19-24 and 26-27 stand rejected under 35 U.S.C. §102(e) by U.S. Patent 6,510,144 to Dommett et al. (hereafter Dommett).

Claims 2, 4, 11, 13, 16, 18 and 25 stand rejected under 35 U.S.C. §103(a) over Dommett in view of U.S. Patent 6,247,058 to Miller et al. (hereafter Miller).

As discussed below in the section entitled “Argument” applicant has separately made arguments for the claims. Applicant believes that each of the claims stands and falls separately from one another.

### **ARGUMENT**

The present application contains four independent claims, namely independent claims 1, 8, 15 and 23. These claims contain different features as may be evidenced by the specifically claimed features and/or as may be pointed out below. For ease of illustration and discussion, similar types of claims (or claim features) may be discussed with respect to each other. This is not an admission that the claims are the same or that they stand or fall together. Rather, this is an attempt to narrow the number of issues and to limit the number of arguments. While arguments may be similar for different claims, it should be understood that differently claimed features are expressly used.

Applicant is providing arguments below to show that the applied references do not teach or suggest the claimed features. Applicant respectfully submits that the Office Action has improperly combined the references in order to meet the claimed features.

Each of independent claims is believed to define patentable subject matter as discussed below. Each of the dependent claims depends from at least one of the independent claims and therefore defines patentable subject matter at least for this additional reason. In addition, the dependent claims recite features that further and independently distinguish over the applied references.

**Independent Claim 1**

Independent claim 1 recites a first foreign agent initially receiving the packets from the home agent and storing them in a buffer and additionally sending the stored packets to a second foreign agent included in a second foreign network if the mobile node is moved to the second foreign network, the first foreign agent being included in the first foreign network. Independent claim 1 also recites that the mobile node sends a notification message to the first foreign agent if the mobile node is moved to the second foreign network.

Dommetry does not teach or suggest all the features of independent claim 1. In rejecting previous dependent claim 6 (now included within independent claim 1), the Office Action and the Advisory Action cite Dommetry's col. 7, lines 9-40 and col. 11, lines 26-34. However, these sections of Dommetry do not discuss the mobile node sending a notification message to the first foreign agent if the mobile node is moved. That is, the cited sections of Dommetry do not relate to a mobile node communicating to a first foreign agent. The Office Action (on page 3, lines 8-11) appears to state that Dommetry discloses a first foreign agent receiving a binding update message from a new foreign agent and that the mobile node informs the new foreign agent about the location of the old foreign agent so that a binding update message is sent. However, as stated above, these sections do not teach or suggest a mobile node sending a notification message to the first foreign agent. These sections also do not teach or suggest sending a notification message. The Office Action clearly admits that Dommetry receives a binding update message from a new foreign agent, which differs from the claimed mobile node.



Even further, Dommety does not teach or suggest a first foreign agent sending stored packets to a second foreign agent included in a second foreign network if the mobile node is moved to the second foreign network. The Office Action (on page 5) and the Advisory Action appear to reference Dommety's Figures 2A-2B; col. 5, line 57-col. 6, line 56; col. 3, lines 4-49; col. 7, lines 9-49 and col. 11, lines 26-44. However, Dommety does not teach or suggest the sending of stored packets from a first foreign agent to a second foreign agent. Rather, Dommety discusses retransmission of the data packets based on updated information. The retransmission of the data is from the sender of the original data. See, for example, Dommety's col. 8, lines 59-62 and col. 11, lines 61-63. Dommety does not relate to data packets stored in a buffer of a first foreign agent and additionally sending the stored packets to a second foreign agent if the mobile node is moved to a second foreign network.

The Office Action (on page 2) states that updated information is stored in a first foreign agent where buffering is performed and retransmission of a data packet to a second foreign agent is done. The Office Action cites Dommety's col. 5, line 57-col. 6, line 24; col. 7, lines 28-56; and col. 7, lines 8-27. However, these cited sections of Dommety do not disclose transmission of a data packet from a first foreign agent to a second foreign agent as alleged. Rather, data packets are retransmitted from the sender of the original data. See Dommety's col. 8, lines 59-62 and col. 11, lines 61-63. Dommety does disclose a receiving node moving from one foreign agent to another foreign agent. However, Dommety does not disclose that the first foreign agent sends stored packets to the second foreign agent. See Dommety's col. 7, beginning at line 4. In such a situation, a first foreign agent may trigger retransmission (from an original

sender) based on a binding update message from a new (or second) foreign agent. See Dommety's col. 7, lines 35-40. Additionally, the retransmission is of the second portion of packets (i.e., the packets not originally received). See col. 7, lines 28-30.

Applicant respectfully submits that the cited sections of Dommety, namely col. 5, line 57-col. 6, line 24; col. 7, lines 28-56 and col. 7, lines 8-27 do not relate to a first foreign agent initially receiving the packets from the home agent and storing them in a buffer and additionally sending the stored packets to a second foreign agent included in a second foreign network. The Office Action appears to cite Dommety's col. 7, lines 8-27 as showing that a receiving mobile node may move from a first foreign agent to a second foreign agent. The Office Action states that buffering and sharing may be performed on any foreign agent or the mobile node itself. However, this does not suggest a first foreign agent sending the stored packets (in a buffer) to a second foreign agent included in a second foreign network if the mobile node is moved to the second foreign network. Rather, Dommety discloses that the foreign agent may perform buffering and triggering for retransmission of data from the sending node. Dommety has no suggestion of a first foreign agent sending stored packets to a second foreign agent included in a second foreign network, as recited in independent claim 1.

For at least the reasons set forth above, Dommety does not teach or suggest all the claimed features. Thus, independent claim 1 defines patentable subject matter.

### **Dependent Claim 2**

Dependent claim 2 depends from claim 1 and therefore defines patentable subject matter at least for this reason. However, dependent claim 2 contains additional features such that

dependent claim 2 does not stand or fall together with independent claim 1. For example, dependent claim 2 recites that the first foreign agent deletes the stored packets after sending the stored packets to the second foreign agent. The Office Action (on page 11) states that Dommety does not teach deleting stored packets. The Office Action then cites Miller for these missing features. However, there is no suggestion for combining Miller with Dommety in order to obtain the claimed features. Miller does not relate to the sending of packets between foreign agents. Thus, there is no suggestion for these features of dependent claim 2. Thus, dependent claim 2 defines patentable subject matter at least for this additional reason.

### **Dependent Claim 3**

Dependent claim 3 depends from claim 1 and therefore defines patentable subject matter at least for this reason. However, dependent claim 3 contains additional features such that dependent claim 3 does not stand or fall together with independent claim 1. For example, dependent claim 3 recites that the first foreign agent additionally sends the stored packets to the mobile node if the mobile node continues to be linked to the first foreign network. The Office Action cites Dommety's col. 5, line 57-col. 6, lines 42 and col. 7, lines 4-49 for these features. However, there is no suggestion for these features in combination with the other features of independent claim 1. Thus, dependent claim 3 defines patentable subject matter at least for this additional reason.

### **Dependent Claim 4**

Dependent claim 4 depends from claim 3 and therefore defines patentable subject matter at least for this reason. However, dependent claim 4 contains additional features such that

dependent claim 4 does not stand or fall together with independent claim 1 and/or dependent claim 3. For example, dependent claim 4 recites that the first foreign agent deletes the stored packets after sending the stored packets to the mobile node. The Office Action (on page 11) states that Dommetry does not teach deleting stored packets. The Office Action then cites Miller for these missing features. However, there is no suggestion for combining Miller with Dommetry in order to obtain the claimed features. Miller does not relate to the sending of packets from a first foreign agent to a mobile node. Thus, there is no suggestion for these features of dependent claim 4. Thus, dependent claim 4 defines patentable subject matter at least for this additional reason.

#### **Dependent Claim 5**

Dependent claim 5 depends from claim 1 and therefore defines patentable subject matter at least for this reason. However, dependent claim 5 contains additional features such that dependent claim 5 does not stand or fall together with independent claim 1. For example, dependent claim 5 recites that the buffer is coupled to the first foreign agent. The Office Action cites Dommetry's col. 5, lines 29-66 for these features. However, there is no suggestion for these features in combination with the other features of independent claim 1. Thus, dependent claim 5 defines patentable subject matter at least for this additional reason.

#### **Dependent Claim 7**

Dependent claim 7 depends from claim 1 and therefore defines patentable subject matter at least for this reason. However, dependent claim 7 contains additional features such that dependent claim 7 does not stand or fall together with independent claim 1. For example,

dependent claim 7 recites that the first foreign agent determines whether the mobile node is moved to the second foreign network by checking whether the notification message is received from the mobile node. The Office Action cites Dommety's col. 2, lines 1-48; col. 7, lines 9-40 and col. 11, lines 26-34. However, these cited sections do not relate to a notification message or to a notification message being received from a mobile node. Thus, dependent claim 7 defines patentable subject matter at least for this additional reason.

#### **Independent Claim 8**

Independent claim 8 recites sending a notification message from the mobile node to the first foreign agent if the mobile node moves to a second foreign network having a second foreign agent, and sending the packets stored in the first buffer to the second foreign agent and storing them in a second buffer if the first foreign agent receives the notification message.

Dommety does not teach or suggest all the features of independent claim 8. In rejecting previous dependent claim 14 (now generally included within independent claim 8), the Office Action and the Advisory Action cite Dommety's col. 7, lines 9-49 and col. 11, lines 26-34. However, these sections of Dommety do not discuss sending a notification message from the mobile node to the first foreign agent if the mobile node moves to a second foreign network. That is, the cited sections of Dommety do not relate to a mobile node communicating to a first foreign agent. The Office Action (on page 3, lines 8-11) appears to state that Dommety discloses a first foreign agent receiving a binding update message from a new foreign agent and that the mobile node informs the new foreign agent about the location of the old foreign agent so that a binding update message is sent. However, as stated above, these sections do not teach

or suggest sending a notification message from a mobile node to the first foreign agent. These sections also do not teach or suggest sending a notification message. The Office Action clearly admits that Dommety receives a binding update message from a new foreign agent, which differs from the claimed mobile node.

Even further, Dommety does not teach or suggest sending the packets stored in the first buffer to the second foreign agent and storing them in a second buffer. The Office Action (on page 5) and the Advisory Action appear to reference Dommety's Figures 2A-2B; col. 5, line 57-col. 6, line 56; col. 3, lines 4-49; col. 7, lines 9-49 and col. 11, lines 26-44. However, Dommety does not teach or suggest the sending of packets stored in a first buffer and storing them in a second buffer. Rather, Dommety discusses retransmission of the data packets based on updated information. The retransmission of the data is from the sender of the original data. See, for example, Dommety's col. 8, lines 59-62 and col. 11, lines 61-63. Dommety does not relate to sending of packets stored in a first buffer (of a first foreign agent) and additionally storing them in a second buffer.

For at least the reasons set for the above, Dommety and the other applied references do not teach or suggest all the features of independent claim 8. Thus, independent claim 8 defines patentable subject matter.

#### **Dependent Claim 9**

Dependent claim 9 depends from independent claim 8 and therefore defines patentable subject matter at least for this reason. However, dependent claim 9 contains additional features such that dependent claim 9 does not stand or fall together with independent claim 8. For

example, dependent claim 9 recites that the first buffer is coupled to the first foreign agent. The Office Action cites Dommety's col. 5, lines 29-66. However, there is no suggestion for these features in combination with the other features of independent claim 1. Thus, dependent claim 9 defines patentable subject matter at least for this additional reason.

#### **Dependent Claim 10**

Dependent claim 10 depends from independent claim 8 and therefore defines patentable subject matter at least for this reason. However, dependent claim 10 contains additional features such that dependent claim 10 does not stand or fall together with independent claim 8. For example, dependent claim 10 recites that the second buffer is coupled to the second foreign agent. The Office Action cites Dommety's col. 5, lines 29-66. However, there is no suggestion for these features in combination with the other features of independent claim 1. Thus, dependent claim 10 defines patentable subject matter at least for this additional reason.

#### **Dependent Claim 11**

Dependent claim 11 depends from independent claim 8 and therefore defines patentable subject matter at least for this reason. However, dependent claim 11 contains additional features such that dependent claim 11 does not stand or fall together with independent claim 8. For example, dependent claim 11 recites deleting the packets stored in the first buffer after sending the packets stored in the first buffer to the second foreign agent. The Office Action (on page 11) states that Dommety does not teach deleting stored packets. The Office Action then cites Miller for these missing features. However, there is no suggestion for combining Miller with Dommety in order to obtain the claimed features. Miller does not relate to the sending of packets from a

first buffer to a second foreign agent. Thus, there is no suggestion for these features. Dependent claim 11 therefore defines patentable subject matter at least for this additional reason.

### **Dependent Claim 12**

Dependent claim 12 depends from independent claim 8 and therefore defines patentable subject matter at least for this reason. However, dependent claim 12 contains additional features such that dependent claim 12 does not stand or fall together with independent claim 8. For example, dependent claim 12 recites transmitting the packets stored in the first buffer to the mobile node if the mobile node continues to be linked to the first foreign network. The Office Action cites Dommety's col. 5, line 57-col. 6, lines 42 and col. 7, lines 4-49 for these features. However, there is no suggestion for these features in combination with the other features of independent claim 8. Thus, dependent claim 12 defines patentable subject matter at least for this additional reason.

### **Dependent Claim 13**

Dependent claim 13 depends from dependent claim 12 and therefore defines patentable subject matter at least for this reason. However, dependent claim 13 contains additional features such that dependent claim 13 does not stand or fall together with independent claim 8 and/or dependent claim 12. For example, dependent claim 13 recites deleting the packets stored in the first buffer after transmitting the packets stored in the first buffer to the mobile node. The Office Action (on page 11) states that Dommety does not teach deleting stored packets. The Office Action then cites Miller for these missing features. However, there is no suggestion for combining Miller with Dommety in order to obtain the claimed features. Miller does not relate



to transmitting the packets stored in the first buffer to the mobile node. Thus, dependent claim 13 defines patentable subject matter at least for this additional reason.

### **Independent Claim 15**

Independent claim 15 recites sending a notification message from the mobile node to a first foreign agent if the mobile node moves from a first foreign network to a second foreign network, and determining if the determined mobile node is moved to a second foreign network having a second foreign agent. Independent claim 15 also recites transmitting the packets stored in the buffer to the second foreign agent if the mobile node is moved to the second foreign network. Dommety does not teach or suggest these features for at least the reasons set forth above.

Dommety does not teach or suggest all the features of independent claim 15. In rejecting previous dependent claim 20 (now generally included within independent claim 15), the Office Action and the Advisory Action cite Dommety's col. 7, lines 9-40 and col. 11, lines 26-34. However, these sections of Dommety do not discuss sending a notification message from the mobile node to the first foreign agent if the mobile node moves from a first foreign network to a second foreign network. That is, the cited sections of Dommety do not relate to a mobile node communicating to a first foreign agent. The Office Action (on page 3, lines 8-11) appears to state that Dommety discloses a first foreign agent receiving a binding update message from a new foreign agent and that the mobile node informs the new foreign agent about the location of the old foreign agent so that a binding update message is sent. However, as stated above, these sections do not teach or suggest sending a notification message from a mobile node to the first

foreign agent. These sections also do not teach or suggest sending a notification message. The Office Action clearly admits that Dommety receives a binding update message from a new foreign agent, which differs from the claimed mobile node.

Even further, Dommety does not teach or suggest transmitting the packets stored in the buffer to the second foreign agent if the mobile node is moved to the second foreign network. The Office Action (on page 5) and the Advisory Action appear to reference Dommety's Figures 2A-2B; col. 5, line 57-col. 6, line 56; col. 3, lines 4-49; col. 7, lines 9-49 and col. 11, lines 26-44. However, Dommety does not teach or suggest transmitting the packets stored in the buffer to the second foreign agent. Rather, Dommety discusses retransmission of the data packets based on updated information. The retransmission of the data is from the sender of the original data. See, for example, Dommety's col. 8, lines 59-62 and col. 11, lines 61-63. Dommety does not relate to transmitting the packets stored in the buffer (of a first foreign agent).

Accordingly, Dommety and the other applied references do not teach or suggest all the features of independent claim 15. Thus, independent claim 15 defines patentable subject matter at least for these reasons.

#### **Dependent Claim 16**

Dependent claim 16 depends from independent claim 15 and therefore defines patentable subject matter at least for this reason. However, dependent claim 16 contains additional features such that dependent claim 16 does not stand or fall together with independent claim 15. For example, dependent claim 16 recites deleting the packets stored in the buffer after transmitting the packets stored in the buffer to the second foreign agent. The Office Action (on page 11)

states that Dommety does not teach deleting stored packets. The Office Action then cites Miller for these missing features. However, there is no suggestion for combining Miller with Dommety in order to obtain the claimed features. Miller does not relate to the transmitting of packets from a buffer to a second foreign agent. Thus, there is no suggestion for these features. Thus, dependent claim 16 defines patentable subject matter at least for this additional reason.

#### **Dependent Claim 17**

Dependent claim 17 depends from independent claim 15 and therefore defines patentable subject matter at least for this reason. However, dependent claim 17 contains additional features such that dependent claim 17 does not stand or fall together with independent claim 15. For example, dependent claim 17 recites transmitting the packets stored in the buffer to the mobile node if the mobile node continues to be linked to the first foreign network. The Office Action cites Dommety's col. 5, line 57-col. 6, line 42 and col. 7, lines 4-49 for these features. However, there is no suggestion for these features in combination with the other features of independent claim 15. Thus, dependent claim 17 defines patentable subject matter at least for this additional reason.

#### **Dependent Claim 18**

Dependent claim 18 depends from independent claim 15 and therefore defines patentable subject matter at least for this reason. However, dependent claim 18 contains additional features such that dependent claim 18 does not stand or fall together with independent claim 15. For example, dependent claim 18 recites deleting the packets stored in the buffer after transmitting the packets stored in the buffer to the mobile node. The Office Action (on page 11) states that

Dommety does not teach deleting stored packets. The Office Action then cites Miller for these missing features. However, there is no suggestion for combining Miller with Dommety in order to obtain the claimed features. Miller does not relate to the transmitting of packets from a buffer to a mobile node. Thus, there is no suggestion for these features of dependent claim 18. Thus, dependent claim 18 defines patentable subject matter at least for this additional reason.

#### **Dependent Claim 19**

Dependent claim 19 depends from independent claim 15 and therefore defines patentable subject matter at least for this reason. However, dependent claim 19 contains additional features such that dependent claim 19 does not stand or fall together with independent claim 15. For example, dependent claim 19 recites that the buffer is coupled to the first foreign agent. The Office Action cites Dommety's col. 5, lines 29-66 for these features. However, there is no suggestion for these features in combination with the other features of independent claim 15. Thus, dependent claim 19 defines patentable subject matter at least for this additional reason.

#### **Dependent Claim 21**

Dependent claim 21 depends from claim 15 and therefore defines patentable subject matter at least for this reason. However, dependent claim 21 contains additional features such that dependent claim 21 does not stand or fall together with independent claim 15. For example, dependent claim 21 recites that the determining is performed by checking whether the notification message is received from the mobile node. The Office Action cites Dommety's col. 2, lines 1-48; col. 7, lines 9-40 and col. 11, lines 26-34. However, these cited sections do not

relate to a notification message or to a notification message being received from a mobile node.

Thus, dependent claim 21 defines patentable subject matter at least for this additional reason.

### **Dependent Claim 22**

Dependent claim 22 depends from claim 15 and therefore defines patentable subject matter at least for this reason. However, dependent claim 22 contains additional features such that dependent claim 22 does not stand or fall together with independent claim 15. For example, dependent claim 22 recites an IP address of the second foreign agent is indicated in the notification message. The Office Action cites Dommetry's col. 2, lines 1-48 and col. 11, lines 26-44 for these features. However, the cited sections do not relate to a notification message (sent from the mobile node). Thus, dependent claim 22 defines patentable subject matter at least for this additional reason.

### **Independent Claim 23**

Independent claim 23 recites sending a notification message from a mobile node to the first foreign agent when a mobile node moves from the first foreign network to a second foreign network and sending the packets in the first buffer to a second foreign agent associated with the second foreign network.

Dommetry does not teach or suggest all the features of independent claim 23. In rejecting previous dependent claim 26 (now generally included within independent claim 23), the Office Action and the Advisory Action cite Dommetry's col. 7, lines 9-49 and col. 11, lines 26-44. However, these sections of Dommetry do not discuss sending a notification message from a mobile node to the first foreign agent when a mobile node moves from the first foreign network

to a second foreign network. That is, the cited sections of Dommety do not relate to a mobile node communicating to a first foreign agent. The Office Action (on page 3, lines 8-11) appears to state that Dommety discloses a first foreign agent receiving a binding update message from a new foreign agent and that the mobile node informs the new foreign agent about the location of the old foreign agent so that a binding update message is sent. However, as stated above, these sections do not teach or suggest sending a notification message from a mobile node to the first foreign agent. These sections also do not teach or suggest sending a notification message. The Office Action clearly admits that Dommety receives a binding update message from a new foreign agent, which differs from the claimed mobile node.

Even further, Dommety does not teach or suggest sending the packets in the first buffer to a second foreign agent associated with the second foreign network. The Office Action (on page 5) and the Advisory Action appear to reference Dommety's Figures 2A-2B; col. 5, line 57-col. 6, line 56; col. 3, lines 4-49; col. 7, lines 9-49 and col. 11, lines 26-44. However, Dommety does not teach or suggest sending the packets in the first buffer to a second foreign agent. Rather, Dommety discusses retransmission of the data packets based on updated information. The retransmission of the data is from the sender of the original data. See, for example, Dommety's col. 8, lines 59-62 and col. 11, lines 61-63. Dommety does not relate to sending the packets in the first buffer to a second foreign agent.

Accordingly, Dommety and the other applied references do not teach or suggest all the features of independent claim 23. Thus, independent claim 23 defines patentable subject matter at least for these additional reasons.

**Dependent Claim 24**

Dependent claim 24 depends from independent claim 23 and therefore defines patentable subject matter at least for this reason. However, dependent claim 24 contains additional features such that dependent claim 24 does not stand or fall together with independent claim 23. For example, dependent claim 24 recites storing the packets in a second buffer associated with the second foreign agent. The Office Action cites Dommety's col. 5, line 29-col. 6, line 25 for these missing features. However, the cited section does not relate to the features of dependent claim 24 in combination with the features of independent claim 23. Thus, dependent claim 24 defines patentable subject matter at least for this additional reason.

**Dependent Claim 25**

Dependent claim 25 depends from independent claim 23 and therefore defines patentable subject matter at least for this reason. However, dependent claim 25 contains additional features such that dependent claim 25 does not stand or fall together with independent claim 23. For example, dependent claim 25 recites deleting the packets stored in the first buffer after sending the packets to the second foreign agent. The Office Action (on page 11) states that Dommety does not teach deleting stored packets. The Office Action then cites Miller for these missing features. However, there is no suggestion for combining Miller with Dommety in order to obtain the claimed features. Miller does not relate to the sending of packets between foreign agents. Thus, there is no suggestion for these features. Thus, dependent claim 25 defines patentable subject matter at least for this additional reason.

**Dependent Claim 27**

Dependent claim 27 depends from independent claim 23 and therefore defines patentable subject matter at least for this reason. However, dependent claim 27 contains additional features such that dependent claim 27 does not stand or fall together with independent claim 23. For example, dependent claim 27 recites sending the packets to a home agent and sending the packets from the home agent to the first foreign agent. The Office Action cites various sections of Dommetry. However, the cited sections do not suggest the features of dependent claim 27 in combination with the other features of independent claim 23. Thus, dependent claim 27 defines patentable subject matter at least for this additional reason.

**CLAIMS APPENDIX**

The attached Claims Appendix contains a copy of the claims involved in the appeal.

**EVIDENCE APPENDIX**

Applicant has not provided any evidence with this appeal and therefore an Evidence Appendix is not provided.

**RELATED PROCEEDINGS APPENDIX**

Applicant is not providing copies of related decisions and therefore a Related Proceeding Appendix is not provided.



**CONCLUSION**

It is respectfully submitted that the above arguments show that each of claims 1-5, 7-13, 15-19, 21-25 and 27 are patentable over the applied references. Based at least on these reasons, it is respectfully submitted that each of claims 1-5, 7-13, 15-19, 21-25 and 27 defines patentable subject matter. Applicant respectfully requests that the rejections of claims 1-5, 7-13, 15-19, 21-25 and 27 set forth in the September 22, 2005 Office Action be withdrawn.

Respectfully submitted,  
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A handwritten signature in black ink, appearing to read "David C. Oren", is written over the printed name.

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**Date: MAY 4, 2006**

**CLAIMS APPENDIX**

1. A mobile Internet Protocol (IP) system, comprising:
  - a mobile node initially linked to a first foreign network;
  - a home agent receiving a set of data packets, which are supposed to be transmitted to the mobile node, the home agent being included in a home network of the mobile node; and
  - a first foreign agent initially receiving the packets from the home agent and storing them in a buffer and additionally sending the stored packets to a second foreign agent included in a second foreign network if the mobile node is moved to the second foreign network, the first foreign agent being included in the first foreign network, wherein the mobile node sends a notification message to the first foreign agent if the mobile node is moved to the second foreign network.
2. The mobile IP system of claim 1, wherein the first foreign agent deletes the stored packets after sending the stored packets to the second foreign agent.
3. The mobile IP system of claim 1, wherein the first foreign agent additionally sends the stored packets to the mobile node if the mobile node continues to be linked to the first foreign network.

4. The mobile IP system of claim 3, wherein the first foreign agent deletes the stored packets after sending the stored packets to the mobile node.
5. The mobile IP system of claim 1, wherein the buffer is coupled to the first foreign agent.
7. The mobile IP system of claim 1, wherein the first foreign agent determines whether the mobile node is moved to the second foreign network by checking whether the notification message is received from the mobile node.
8. A method of transmitting data in a mobile Internet Protocol (IP) network, the method comprising the steps of:
  - (a) transmitting a set of data packets to a home agent of a mobile node, the mobile node being currently linked to a first foreign network having a first foreign agent;
  - (b) sending the packets received by the home agent to the first foreign agent and storing them in a first buffer;
  - (c) sending a notification message from the mobile node to the first foreign agent if the mobile node moves to a second foreign network having a second foreign agent;

(d) sending the packets stored in the first buffer to the second foreign agent and storing them in a second buffer if the first foreign agent receives the notification message; and

(e) transmitting the packets stored in the second buffer to the mobile node.

9. The method of claim 8, wherein the first buffer is coupled to the first foreign agent.

10. The method of claim 8, wherein the second buffer is coupled to the second foreign agent.

11. The method of claim 8, further comprising a step of deleting the packets stored in the first buffer after sending the packets stored in the first buffer to the second foreign agent.

12. The method of claim 8, further comprising a step of transmitting the packets stored in the first buffer to the mobile node if the mobile node continues to be linked to the first foreign network.

13. The method of claim 12, further comprising a step of deleting the packets stored in the first buffer after transmitting the packets stored in the first buffer to the mobile node.

15. A data routing method of a first foreign agent in a mobile Internet Protocol (IP) network, the method comprising the steps of:

- (a) receiving a set of data packets and storing them in a buffer;
- (b) determining a mobile node to which the packets are supposed to be transmitted;
- (c) sending a notification message from the mobile node to a first foreign agent if the mobile node moves from a first foreign network to a second foreign network;
- (d) determining if the determined mobile node is moved to the second foreign network having a second foreign agent; and
- (e) transmitting the packets stored in the buffer to the second foreign agent if the mobile node is moved to the second foreign network.

16. The method of claim 15, further comprising a step of deleting the packets stored in the buffer after transmitting the packets stored in the buffer to the second foreign agent.

17. The method of claim 15, further comprising a step of transmitting the packets stored in the buffer to the mobile node if the mobile node continues to be linked to the first foreign network.

18. The method of claim 17, further comprising a step of deleting the packets stored in the buffer after transmitting the packets stored in the buffer to the mobile node.

19. The method of claim 15, wherein the buffer is coupled to the first foreign agent.

21. The method of claim 15, wherein the determining is performed by checking whether the notification message is received from the mobile node.

22. The method of claim 15, wherein an IP address of the second foreign agent is indicated in the notification message.

23. A mobile Internet Protocol (IP) method comprising:  
receiving packets at a first foreign agent associated with a first foreign network;  
storing the packets in a first buffer;  
sending a notification message from a mobile node to the first foreign agent when the mobile node moves from the first foreign network to a second foreign network; and  
sending the packets in the first buffer to a second foreign agent associated with the second foreign network.

24. The method of claim 23, further comprising storing the packets in a second buffer associated with the second foreign agent.

25. The method of claim 23, further comprising deleting the packets stored in the first buffer after sending the packets to the second foreign agent.

27. The method of claim 23, further comprising:  
sending the packets to a home agent; and  
sending the packets from the home agent to the first foreign agent.